Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Wireless E911 Location Accuracy Requirements	)	PS Docket No. 07-114
	)	
Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems	)	CC Docket No. 94-102
	)	
Association of Public Safety Communications Officials-International, Inc. Request for Declaratory Ruling	)	
	)	
911 Requirements for IP-Enabled Service Providers	)	WC Docket No. 05-196

To: The Commission

COMMENTS OF RURAL CELLULAR ASSOCIATION

Rural Cellular Association ("RCA")[1], by its attorneys, respectfully submits comments in response to the Commission's *Notice of Proposed Rulemaking* in the above-captioned proceeding seeking input on issues relating to 911 location accuracy and reliability requirements for commercial mobile radio service carriers.[2] At the request of the Association of Public-Safety Communications Officials – International ("APCO") the Commission proposes to require licensees subject to the rule to satisfy the standards at a geographic level defined by the coverage area of each respective Public Safety Answering Point ("PSAP"). RCA will also comment on whether, if the Commission adopts the proposal, it should defer enforcement of Section 20.18(h)

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[1] RCA is an association representing the interests of nearly 100 small and rural wireless licensees providing commercial services to subscribers throughout the nation. Its member companies provide service in more than 135 rural and small metropolitan markets where approximately 14.6 million people reside. RCA was formed in 1993 to address the distinctive issues facing wireless service providers.

[2] These Comments specifically address Section III.A of the *Notice* regarding whether the Commission should clarify Section 20.18(h) of the Commission's rules, specifying standards for wireless E911 Phase II location accuracy and reliability. *See Notice of Proposed Rulemaking*, PS Docket No. 07-114, CC Docket No. 94-102, WC Docket No. 05-196, released June 1, 2007 (*"Notice"* or *"NPRM"*)

to allow wireless carriers to come into compliance with the revised geographic scope of wireless location accuracy requirements at the PSAP level.

RCA recommends that any additional E911 location accuracy standards be developed by consensus of stakeholders, including Commission staff, Public Safety, telecommunications industry (wireless and local exchange carriers), infrastructure vendors, location vendors (with proven, deployed technology) and handset vendors. The impact of new standards upon small and regional wireless carriers would be significant. RCA encourages the Commission to refrain from adopting rules that cannot be uniformly enforced, and instead permit the representatives of E911 stakeholders to develop the next generation of location accuracy standards.[3]

I. Introduction and Background

RCA is an active supporter of efforts to improve public safety through cellular phone technology. RCA participated in the Network Reliability & Interoperability ("NRIC") Focus Group 1A that studied E911 location accuracy measurement issues. RCA joined in recommendations that were supported by the public safety groups National Emergency Number Association ("NENA") and National Association of State 9-1-1 Administrators ("NASNA"). Additionally, RCA is a supporter of the E9-1-1 Institute in Washington that promotes safety initiatives using wireless technology. None of these groups has suggested that Phase II accuracy requirements should be met at the PSAP level.

NRIC Focus Group 1A concluded that accuracy compliance should be measured at the State level.[4] Given the limitations of location technology, it was understood that Section 20.18(h) accuracy levels could not be met at the PSAP level in many circumstances. Even the APCO

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[3] RCA's wireless carriers operate in rural markets and in a few small metropolitan areas. No member has as many as 1 million customers, and the vast majority of RCA's members serve fewer than 500,000 customers.

[4] *See* NRIC VII, Focus Group 1A, *Near Term Issues for Emergency/E9-1-1 Services,* Final Report, Section 4.1.2, p. 21 (12/06/05) ("NRIC VII Report"). Ongoing testing was recommended to ensure continued system performance.

recognized that Metropolitan Statistical Areas ("MSAs") and Rural Statistical Areas ("RSAs") may serve as appropriate boundaries within which to measure and test location accuracy. [5] Contrary to the Commission's tentative conclusion, therefore, measuring and testing location accuracy over geographic areas larger than PSAP service areas is not contrary to the interests of public safety and homeland security.

RCA concurs that the Commission should provide guidance, informed by industry, on how to achieve location accuracy that will "provide meaningful automatic location identification that permits first responders to render aid, regardless of the technology or platform employed." [6] The Commission often has delegated to competent coalitions the task of defining elements of technical compliance with public safety requirements.[7]

In this instance the Commission does not need to revise Section 20.18(h) of FCC rules to ensure compliance with the Wireless Communications and Public Safety Act of 1999.[8] As needed, stakeholder groups can assume responsibility for review of location accuracy measurement and testing compliance. Given a chance, E911 stakeholders are more likely to develop standards that PSAPs can use and carriers can meet. As contemplated by OET Bulletin No. 71, the guidelines for testing and evaluating compliance with accuracy standards "will

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[5] *NPRM*, at ¶ 4.

[6] *NPRM*, at ¶ 6.

[7] The FCC delegates to Telecommunications Industry Association ("TIA"), Alliance for Telecommunications Industry Solutions ("ATIS") and American National Standards Institute ("ANSI") development of standards for compliance with the Communications Assistance for Law Enforcement Act ("CALEA"). *See Communications Assistance for Law Enforcement Act and Broadband Access and Services, Notice of Proposed Rulemaking and Declaratory Ruling*, 19 FCC Rcd 15676, Appendix D – Standards for Packet-Mode Technologies (2004). The Commission delegates to ANSI development of the standard for assessing and rating hearing aid compatibility for wireless devices for compliance with the Hearing Aid Compatibility Act of 1988. *See Hearing Aid Compatibility Order*, 18 FCC Rcd 16764, at 16770-16771 (2003). And the Commission delegated to the TTY Forum, sponsored by ATIS, development of solutions for TTY-digital compatibility and standards for transmitting 911 calls from text telephone devices. *See Fourth Report and Order*, 15 FCC Rcd 25216, at 25225-25226 (2000).

[8] Wireless Communications and Public Safety Act of 1999, P.L. No. 106-81, enacted October 26, 1999 ("911 Act"). The purpose of the 911 Act is to enhance public safety by encouraging and facilitating the prompt deployment of a nationwide, seamless communications infrastructure for emergency services that includes wireless communications. 911 Act at Section 2(b).

evolve over time," and "methods and procedures may be acceptable if based on sound engineering and statistical practice."[9] Evolving methodologies will take into account practical and technical realities, as well as the variety of conditions and locations in which wireless equipment is used. Measurement of compliance to ensure E911 accuracy is a "living standard" to be set by stakeholders, not by the FCC.

II. Location Accuracy at the Level of Every PSAP Is Not Achievable by Carriers

All parties to this proceeding aim to improve the odds for location of 911 callers. Even APCO, in its "Project LOCATE" report finalized only two months ago, reached the conclusion that an expectation that the PSAP will have consistent and accurate wireless location data delivered with all wireless 911 calls "...exceeds the performance of many systems as deployed and evaluated as part of a designated PSAP Test Area."[10] That there are feasibility issues was clearly recognized in the same APCO report which went on to state: "In conclusion, we understand that there are limitations to today's position determining equipment. We understand that there are business reasons for the networks deployed as they are today."[11] APCO is correct in recognizing that reliable technology is a crucial component to location accuracy and that technology and current network deployment are not ready to support location reporting at the PSAP level.

In adopting the NPRM several members of the Commission made specific references to the limitations of today's location technologies. Commissioner Adelstein stated:

> I am troubled that we are considering imposing a new compliance requirement that we know some carriers will be unable to meet in certain circumstances. To make matters worse, we are bifurcating the proceeding with the goal of setting a new

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[9] OET Bulletin No. 71, page 1.

[10] See *An Assessment of the Value of Location Data Delivered to PSAPS with Enhanced Wireless 911 Calls*, Project LOCATE (Locate Our Citizens At Times Of Emergency), Final Report, April 2007, at Findings and Recommendations, p. 28.

[11] *Id.* at 29.

> accuracy compliance standard well in advance of making a determination of how we can actually achieve improved location accuracy. This is premature from both legal and policy standpoints.[12]

Commissioner McDowell commented:

> At the present time, it appears that measuring location accuracy at the PSAP level presents real challenges to carriers, technology providers, and PSAPs alike. Further, I understand that many wireless carriers are not generally capable of measuring and testing location accuracy at the PSAP level, and that they require adequate time to achieve this measurement. This is not surprising since there are over 6,000 PSAPs in the United States, each with unique deployment, topography, network, and RF propagation issues.[13]

And Commissioner Copps echoed similar concerns:

> We need to get a handle – a better handle than we presently have – on the precise capabilities and limitations of today's emergency calling technologies. It is clear that we still have a serious challenge in making and completing some in-building emergency calls. Such calls comprise, of course, a significant percentage of all emergency calls. We need to resolve that.[14]

In short this *NPRM* has put the cart before the horse by proposing an accuracy requirement that cannot be met with existing networks, and then asking for comment on how and when carriers should meet such a requirement. RCA has guarded confidence that when the Commission reflects further on this matter it will not adopt rules that impose standards that are not technologically achievable at this time.

For now, the PSAP service area is in many situations too small an area to measure for accuracy compliance.[15] It is well known that CDMA carriers that use GPS handsets for location cannot meet PSAP-level accuracy standards in many places within large metropolitan areas due

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[12] *NPRM*, Concurring Statement of Commissioner Jonathan S. Adelstein.

[13] *NPRM*, Statement of Commissioner Robert M. McDowell.

[14] *NPRM*, Statement of Commissioner Michael J. Copps.

[15] The size of geographic areas served by PSAPs varies widely. For example, the boroughs of New York City are served by a single PSAP while small towns in rural areas often are served by separate PSAPs as small as one square mile.

to tall buildings (i.e., "urban canyons") blocking the satellites. In-building calls will often not be able to "see" the satellites in order to transmit location data.

It is also known that GSM-based carriers that use network-based triangulation from cell sites cannot meet PSAP-level accuracy in rural areas where there are not enough cell sites for triangulation.[16] Where there is no population density, towers are farther apart and accurate triangulation is impossible. About half of RCA's members use GSM technology in their rural market systems and need to rely upon cell tower triangulation to locate customers because there is no commercially available GSM handset that can provide location data with the accuracy required by FCC rules. RCA members do not have the collective purchasing power to interest equipment makers in producing location-capable GSM handsets similar to those that are currently available to operators that use CDMA technology.

Requiring wireless carriers to meet accuracy and reliability standards at the PSAP service area level could inadvertently put rural communities in jeopardy of losing access to advanced wireless services. Consumers in rural areas are just now beginning to enjoy the mobility and public safety benefits wireless services can deliver. Yet implementation of the proposed standard may put many small and rural carriers still grappling with the costs associated with E911 and CALEA compliance in a precarious financial situation, potentially leaving millions of rural Americans at risk during an emergency.

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[16] Network-based carriers in rural areas often have cell site arrangements that inhibit reliable triangulation meeting FCC accuracy mandates. In his November 24, 2004 report, Dr. Dale Hatfield observed that it is "intuitively obvious" that accuracy over a particular geographic area will vary with "the number and geometry of nearby base stations," causing carriers serving multiple PSAPs to "not meet the accuracy requirement in an area served by a particular PSAP." (Hatfield Report at 36) Dr. Hatfield's recommended cooperative development of industry-wide procedures for testing and certification, and creation of a voluntary program to create uniform standards. Dr. Hatfield praised NENA's efforts to develop a voluntary testing and certification program for wireless E911 technology, stating, "I believe it could form the basis for a program that could be recognized by the Commission as one method of satisfying the testing and compliance guidelines contemplated by OET-71." He recommended that the Commission, "with appropriate business and industry involvement," provide guidance on the issue of "geographic averaging." (Hatfield Report at 37)

Furthermore, states that fund deployment of E-911 services will face additional fiscal burdens as carriers attempt to comply with an impractical new accuracy rule and inevitably fall short for reasons beyond their control. Noncompliant carriers will cause states to appropriate more funds to assist compliance, even though compliance cannot be achieved.[17]

Despite FCC concerns, PSAPs will have adequate incentive to become Phase II capable without the FCC mandating accuracy at the PSAP level.[18] Absence of guarantees that the location information will meet Section 20.18(h) accuracy levels within their service area certainly has not yet stopped PSAPs from deploying Phase II services. PSAPs will continue to be funded, PSAPs will purchase Phase II location systems and PSAPs will train personnel to use them. In any given PSAP area one or more carriers will deliver accurate Phase II data much of the time, even though all of them cannot do so all of the time. Even when the accuracy is less than perfect due to technological limitations, the data is useful in locating a 911 caller.

III. Deferred Enforcement of an FCC Rule Does Not Mitigate Carriers' Responsibilities

Technology does not exist today that enables carriers to achieve the proposed accuracy requirements. Current technology does not permit rural carriers, location technology providers and PSAPs to deliver and utilize data with Section 20.18(h) accuracy at the PSAP level throughout the wireless service area. It is believed that every wireless carrier in the United States will most likely be non-compliant in some part of their network.

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[17] These points were considered so important to the National Association of State 9-1-1 Administrators ("NASNA") that Steve Marzolf, NASNA's President, sent a letter to the Commission on May 23, 2007 that stated: "To adopt an accuracy testing process that cannot be achieved at this time not only puts the carrier in compliance limbo, but also puts many states in a budgetary limbo until someone can figure out how to achieve the requirement. Instead, NASNA would recommend the Commission accept Phase II as it is, test it to the NRIC VII 1A report recommendation and create a new phase (call it Phase III) that identifies the public safety need for accuracy and develops a plan to achieve that goal." (A copy of NASNA's letter is attached to these Comments.)

[18] *NPRM*, at fn. 14.

It may appear that a convenient solution to an unenforceable rule is to refrain from enforcing the rule. However, carriers do not have the luxury of choosing whether or not to comply with a rule. Wireless carriers must certify in financial audits, loan covenants and roaming contracts that they are in compliance with FCC rules. These certifications will be breached if the proposed rule takes effect, regardless of whether or not the FCC enforces the rule. Relationships will be in jeopardy, penalties will be incurred, money will not be lent and transactions will not take place. Publicly traded companies will be vulnerable to regulatory issues even when they are acting in good faith. Small wireless companies will face financial risk at the threat of regulatory fines for non-compliance, whether or not imposed.

Deferring enforcement of newly adopted accuracy standards in order to explore whether wireless carriers are capable of complying is a patently backwards approach to an avoidable problem.[19] The Commission should refrain from revising Section 20.18(h) to require location accuracy at the PSAP level before it is technically feasible and practical for carriers to locate callers within the accuracy tolerance at the PSAP level. It would be just as impractical for the Commission to adopt policies or rules with detailed variables and exceptions, requiring the agency to administer streams of case-by-case waiver requests. The much more practical approach is to allow public safety interests and the wireless industry to agree to acceptable standards for delivery, measurement and testing of Phase II data.

IV. An E911 Accuracy Forum Should Study Standards for Measurement and Testing

The Commission should instead convene an "E911 Accuracy Forum" ("Forum"), similar to those utilized by the Commission to standardize terms of compliance with CALEA, Hearing Aid Compatibility and current E911 regulations. As suggested in a jointly written *Ex Parte*

[19] Nevertheless, if the Commission were to pursue this backwards approach it should stay, not defer enforcement, of the new rule

presentation to the Commission, the Forum would be a technical solutions body that would report to the Commission, within an appropriate time frame (e.g., six to twelve months), on the following:[20]

- Based on existing test data and new testing, the accuracy levels achievable today for deployed systems using Emergency Services Interconnection Forum ("ESIF") testing methodology by topology (indoor, urban, rural, suburban, highway, etc.) and at different geographic boundary levels (*e.g.* PSAP, MSA/RSA, County, State).[21] This comprehensive data would be used to identify and develop solutions, through industry-Public Safety cooperation, to optimize existing deployed systems and to determine the extent to which current and proposed accuracy rules can be met by the deployed systems and under what circumstances.

- The feasibility and desirability of related rules governing automatic location identification ("ALI") formatting, database queries, and network redundancy concerns also addressed at NRIC VII.[22]

The Forum would be principally staffed by engineers and technical subject matter experts, not policy advocates. Invited participants could include Commission staff, Public Safety, telecommunications industry (wireless and local exchange carriers), infrastructure vendors, location vendors (with proven, deployed technology) and handset vendors.[23] *The Forum would build upon, not repeat, the work already undertaken at NRIC and at other standards bodies (such as ATIS), and APCO's Project LOCATE.*[24] Establishing the Forum would provide the opportunity for all wireless E911 stakeholders, especially those who did not have the opportunity to participate in the NRIC process or be briefed on the comprehensive NRIC recommendations,

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[20] *See* letter dated May 8, 2007 to Marlene H. Dortch, Secretary, FCC, from Dobson Communications Corporation, RCA, T-Mobile USA, Inc. and Verizon Wireless

[21] ESIF is the primary venue for the telecommunications industry, public safety and other stakeholders to generate and refine both technical and operational interconnection issues to ensure life-saving E9-1-1 services are available for everyone in all situations.

[22] *See* NRIC VII Report at Sections 4.3-4.5, pages 24-38

[23] All participants would sign Non-Disclosure Agreements to access confidential data necessary to drive technical solutions.

[24] In this regard, NRIC's recommendations expressly recognized the desirability of optimizing ALI accuracy at the individual PSAP level and provided a mechanism for individual carriers and PSAPs to address those concerns. *See* NRIC VII Report at App. E, pages 52-54.

to better understand the myriad complicated issues associated with location accuracy measurement.

The Forum and *NPRM* would be able to address the practical compliance implications of a particular ALI accuracy methodology or testing regime – a critical consideration given the over 6000 PSAPs in the country, each with its own deployment, topography and propagation issues.

V. Conclusion

Better E911 location accuracy is an important and worthy goal, but wireless carriers should not be victimized for their inability to comply with new, overreaching Commission rules that even the Commission appears to acknowledge are not technologically achievable at this time. A constructive approach would be to convene a forum of stakeholders to analyze the issues and define parameters for improved location accuracy results. E911 location standards and milestones adopted by stakeholders will deliver benefits to public safety in the most efficient manner in the least amount of time. Its purpose will be to identify reasonable means of achievement of location of E911 callers. Wireless carriers would not be set up for failure, as would be the case if the FCC prematurely imposes E-911 accuracy requirements that cannot be technologically and reasonably achieved at the PSAP level.

Respectfully submitted,

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May 23, 2007

Ms. Marlene H. Dortch, Secretary
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Re: Ex Parte Comments, Dockets 94-102

Dear Ms. Dortch,

According to much of the industry press, the Commission may be considering the Wireless E-911 Phase II accuracy issue at their meeting on Thursday, May 31, 2007. Though the position of the National Association of State 9-1-1 Administrators ("NASNA") was well documented during the NRIC VII 1A report, there is an issue that NASNA is uniquely positioned to bring to the Commission's attention.

The issue involves the potential budgetary impact to states that have wireless carrier cost recovery. The original order from the Commission encouraged states to provide carrier cost recovery. Many states, using similar model legislation, defined their allowable cost recovery as those cost necessary to meet "FCC Docket 94-102 Phase I and Phase II". Through the last several years, we have been able to develop accurate budgets based on the costs of the currently available location technologies to meet Phase II.

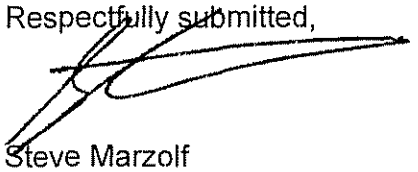
If the Commission adopts Phase II accuracy testing requirements that currently available location technologies cannot meet (such as a requirement for PSAP level testing), states with carrier cost recovery will be responsible for the cost of new technologies that have not yet been developed to meet those requirements. Obviously, since we have no way to project the cost of such new technologies, we cannot plan or budget for these costs. State E-911 programs need to understand and assess the fiscal impact of any new location technologies before the decision is made to implement them. The fiscal impacts may range from minor adjustments to the budget to major additions that far exceed the capability of current funding methodologies.

It is important to remember that the current accuracy requirement (distance measurement) was based on the promise of the location technology BEFORE it was actually developed as a solution. To hold a new technology solution to this same requirement would be highly inappropriate. We must instead determine the optimal accuracy to save lives and focus our efforts to achieving that goal.

The carriers deployed the technologies they were asked to deploy and many states provided cost recovery to those carriers as the Commission originally asked them to do. To adopt an accuracy testing process that cannot be achieved at this time not only puts the carrier in a compliance limbo, but also puts many states in a budgetary limbo until someone can figure out how to achieve the requirement. Instead, NASNA would recommend the Commission accept Phase II as it is, test it to the NRIC VII 1A report recommendation and create a new phase (call it Phase III) that identifies the public safety need for accuracy and develops a plan to achieve that goal.

Thank you for your time and consideration. Please feel free to contact me if you would like to discuss this further or you have any questions about our position.

Respectfully submitted,



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